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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,215	11/22/2000	Akira Ohta	49657-844	9517

20277 7590 04/03/2002
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EXAMINER

CHANG, JOSEPH

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 04/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/717,215

Applicant(s)

OHTA ET AL.

Examiner

Joseph Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 7,9-32,39 and 41-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,33-38 and 40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-67 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

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DETAILED ACTION

Election/Restrictions

Applicant's election of 2-25-2002 in Paper No. 4 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 7, 9-32, 39 and 41-67 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

Claim Objections

Claim 1 is objected to because of the following informalities: the recitation "A high efficiency amplifier, connected to a non-reciprocal circuit element, having an input impedance lower than a standard impedance" contradicts with the limitation in the specification. On Page 22, line 1, it states that an input impedance of the amplifier 1A is the standard value, 50 ohms. Appropriate correction is required.

Specification

The disclosure is objected to because of the following informalities: On Page 19 should "isolator 3" be --isolator 3A-- ? Appropriate correction is required.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8, 33-38 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Makino et al. US Patent 5,945,887 (cited by the applicant).

Makino et al. discloses in figure 1-2 a nonreciprocal circuit device comprising an input terminal (50 ohm), an amplifier circuit 10 having impedance matching circuits (12, 14, 16), an output matching circuit 6 connected to a non-reciprocal circuit 1 that connected to an antenna 11. The amplifier circuit 10 has an output impedance range from 2-12.5 ohms (claim 2 recites 3-30 ohms in which the portion of the output impedance range, 3-12.5 ohms falls within the claimed range), an impedance conversion circuit 6 functions as low-pass filter (col. 4, lines 62-68) Regarding claims 3-6, 8, 35-38 and 40, the output matching circuit 6 inherently performs matching impedance of the harmonic of an output signal of the amplifier circuit, suppressing harmonic-related power leakage or serve as an open or short circuit load to the harmonic in the output signal of the amplifier circuit and adjusting an impedance of a fundamental wave.

Claims 1-6, 8, 33-38 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by admitted prior art of the application 09/717,215.

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The admitted prior art discloses a radio transmission unit 9100 in figures 35 as recited in the claims. The admitted prior art shows an input terminal (input of 104), output terminal (output of 112) connected to a non-reciprocal circuit 103, an amplifier element (105,107), a harmonic processing circuit 111 arranged between the amplifier element 107 and the output terminal. Regarding claim 2, output impedance range from 2 to 12.5 ohms at the terminal of which its portion (3 - 12.5 ohms) falls within the recited range 3 - 30 ohms. Regarding claims 3-6 and 35-38, a harmonic processing circuit 111 inherently performs matching impedance of the harmonic of an output signal of the amplifier circuit, suppressing harmonic-related power leakage or serve as an open or short circuit load to the harmonic in the output signal of the amplifier circuit. Regarding 8 and 35, a fundamental wave matching circuit 112 serves as a reject filter (page 4, line 1) which implying an adjustment of an impedance of a fundamental wave.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Honjo US Patent 5,473,281 discloses an amplifier circuit having impedance matching circuit including higher harmonic processing circuit.

Makino et al. US Patent 6020,793 discloses a non-reciprocal circuit device having an input/output terminal to modify the frequency response.

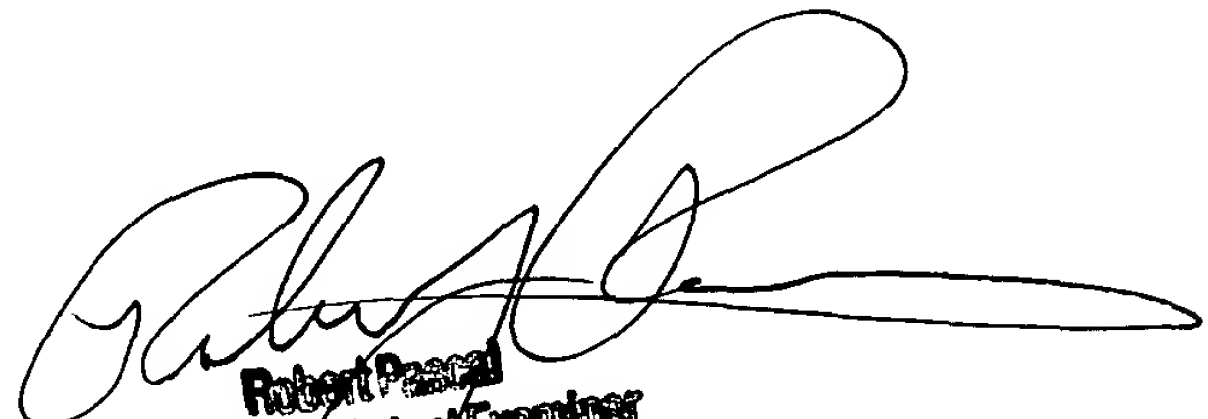
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Chang whose telephone number is (703) 308-4800. The examiner can normally be reached on Mon-Thur 0630-1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

jc
April 1, 2002



Robert Pascal
Supervisory Patent Examiner
Technology Center 2817